

**ONLINE COPY RHIC OPERATIONS PROCEDURES MANUAL
- VALID FOR FIVE (5) WORKING DAYS**

AGS/RHIC OPERATIONS PROCEDURES MANUAL

2.1 Operations Organization And Administration

Text Pages 1 through 4

Attachment

Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
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Approved: Derek Lowenstein 3/12/99
AGS Department Chairman Date

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RHIC Project Director Date

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2.1 AGS Operations Organization And Administration

1. Purpose

Responsibility for the safe and reliable Operation of the AGS complex resides with the on duty Operations Coordinator. The Operations Coordinator is the shift supervisor for the operating personnel and the focus for all operations related questions. The AGS complex is made up of a number of facilities that may include the Linac, the AGS ring, the main magnet power supply, the ring rf acceleration system, the injection equipment, the beam extraction equipment, the beam lines, the Tandem-to-Booster transfer line (TTB), the Booster, the AGS to RHIC transfer line (AtR) and Tandem Van De Graaff. Personnel that are responsible for the day-to-day operations of these facilities are members of the Accelerator Division, the Experimental Planning and Support Division, and the Controls Section. Additional personnel who support the operations belong to the RHIC Project, to the ES&H Services Division, and to the Plant Engineering Division.

2. Responsibilities

2.1 Operations

2.1.1 The personnel normally available (see OPM 2.5 for minimum requirements) to the Operations Coordinator during operations include:

2.1.1.1 One or two main control room operators, who report to the Operations Coordinator and are responsible for the control of the Linac, Booster, AGS, and external beams up to the production targets or injection to RHIC.

2.1.1.2 Collider Accelerator Support technicians, who report to the Operations Coordinator and are responsible for Collider Accelerator Operating Systems,

2.1.1.3 a Cryogenic Target Watch technician, who reports to the Collider Accelerator Support Group Coordinator, and is responsible for the operation of the liquid hydrogen targets,

2.1.1.4 and one Radiological Control Technician (RCT) reports to the Operations Coordinator and is responsible for pulsed and residual radiation measurements, and clearing high intensity secondary areas for beam.

2.1.1.5 Tandem Operators

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2.1.1.6 Siemens and MMPS Operator

2.1.2 Personnel outlined in section 2.1.1 are shown on Attachment 8.1, "Shift Organization Chart".

2.1.3 In addition to the operational practices outlined in AGS-OPM Chapter 2, operating personnel have the following safety responsibilities:

2.1.3.1 safely operate the facility with adherence to procedures, technical specifications, accelerator safety envelope operating limits, and Operational Safety Limits

2.1.3.2 comply with the requirements of Laboratory ES&H Standards and SEAPPM.

2.1.3.3 follow good radiological protection practices and procedures to maintain personnel radiation exposures as low as reasonably achievable, and to reduce the generation of activated materials.

2.1.4 Supervisors of the personnel listed in Section 2.1.2 shall periodically review exposure trends of operating personnel.

2.2 Scheduling Physicist

2.2.1 The Scheduling Physicist, along with the Head of the Experimental Planning and Support Division, and the Accelerator Division's Head of Operations, set the schedule for the daily operation of the ion accelerator complex. The Operations Coordinator is charged with implementing the schedule.

2.3 Additional Personnel

2.3.1 Additional personnel available to the Operations Coordinator include the AGS and RHIC machine physicists and equipment systems specialists. Those persons repair equipment necessary for operations or provide trouble shooting expertise when machine physics or equipment problems arise.

2.3.2 Occasionally, it is necessary that parts of the Accelerator Complex be operated by Accelerator Physicists or System Specialists. The rules governing access to accelerator controls, by such individuals, are to be found in AGS-OPM 2.11. In order to be allowed access to accelerator controls, Accelerator Physicists and Systems Specialists shall:

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- 2.3.2.1 recognize the role of the on-duty Operations Coordinator as the decision maker regarding the safe and reliable operation of the AGS Complex
- 2.3.2.2 follow the orders of the Operations Coordinator, or his designate, during an emergency situation
- 2.3.2.3 not operate any AGS or RHIC Safety System controls at the MCR_2 console, including racks one through six, unless authorized to do so by the Head of the AGS Security Group or the RHIC Safety Systems Section Head, and
- 2.3.2.4 request permission to use the accelerator controls and state the purpose for the use of the controls, to the on-duty Operations Coordinator

2.4 Additional Operating Responsibilities -- Monitoring of Accelerator Performance

2.4.1 Regular meetings are held between the supervisors and group members of the various operating groups to discuss operational problems and possible corrective actions, safety, and other matters of concern. When appropriate, the business discussed at these meetings should be documented.

2.4.2 When appropriate, operations goals should be established in the following areas:

- 2.4.2.1 minimize the unavailability of safety systems
- 2.4.2.2 minimize personnel errors
- 2.4.2.3 maintain reasonably achievable particle losses
- 2.4.2.4 minimize lost facility capability
- 2.4.2.5 minimize the number of unscheduled shutdowns
- 2.4.2.6 maintain complete staffing and training
- 2.4.2.7 minimize hazardous and radioactive waste
- 2.4.2.8 minimize the number alarms/annunciations

2.4.3 Once specific goals are set, they should be audited throughout the running period.

2.5 With respect to RHIC areas where beam is authorized (W-,X-, and Y-Lines and the Collider), the AGS Conduct of Operations applies to RHIC personnel who support operations and report to the Duty Operations Coordinator. RHIC Line management shall still maintain line safety responsibility.

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3. Prerequisites

None.

4. Precautions

None.

5. Procedure

None.

6. Documentation

None.

7. References

7.1 RHIC OPM 2.1 "RHIC Operations Organization and Administration During Periods Without Beam".

8. Attachments

8.1 "Shift Operations Organization Chart".

Fill Out Reading Acknowledgment Form

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Attachment 8.1

SHIFT OPERATIONS ORGANIZATION CHART

